

# Beyond Textbooks and Test Tubes

Story and photos by Judy Suing, Public Affairs Specialist, Tongass National Forest

Three seventh-graders from Sitka's Blatchley Middle School stand in a stream, enthusiastically filling ten-gallon buckets with gravel to secure a log structure that will improve salmon habitat in the Starrigavan Valley. The cold, rainy weather does little to dampen their progress or their spirits.

"Work is fun!" shouts one boy as he continues to fill buckets.

This work is part of the Starrigavan Stream Team, a Forest Service program led by Sitka fisheries biologist Rob Miller and conducted with help from the National Park Service, Sitka Conservation Society, Alaska Department of Fish and Game, and others to get kids in the woods and experience science beyond text books and test tubes.

In the field, the students apply their knowledge of stream invertebrates by collecting them in nets and sorting them into ice cube trays by species. The number and diversity of invertebrates they find will help them describe the health of the stream.

Some of the students are quick to recognize the different invertebrates they learned about in class and they begin sorting them with tweezers. Other students need some time to overcome their initial repulsion to working with the tiny critters:

"Eww...gross!"

"I dare you to eat one!"

"Don't touch me with that thing!"



Students from Blatchley Middle School demonstrate their might after constructing a log structure to improve fish habitat.

After a few minutes of watching their peers work and being handed a pair of tweezers and an identification chart, even these reluctant students begin classifying these indicator species.

Next, students get first-hand experience measuring the pH and dissolved oxygen in the stream and learn how water chemistry affects aquatic organisms.

Braving the chilly water, students then measure stream cross-sections and pebble sizes to understand the quality of the stream habitat and how fish and other aquatic species make use of stream ripples and pools.

These activities are hardly busy-work. The Forest Service uses the data collected by the students to help determine the long-term effects of stream restoration in the Starrigavan Valley. Blatchley math teacher Melissa Robins will take these data sets back to the classroom for her students to practice their statistics lessons.

When the students get to the

stream restoration station the goal is not just to improve the habitat for the salmon that the larger community relies on, but it also gives the students a tangible reminder of the lessons they learned in this outdoor classroom. The idea is for the students to come back and see how the log structures they helped to install improved habitat for fish and other wildlife.

In addition to getting kids outside to explore the natural world, one of Miller's goals for this program is to provide students an opportunity to explore careers working in the woods. Miller himself was inspired to work for the Forest Service after taking an outdoor field course in the third grade.



Geoff Smith, National Park Service, assists students in collecting stream invertebrates. Photo by Judy Suing.

“If we could get at least three or four of these kids each year interested in this kind of work, I’d be happy,” said Miller.

When asked about their favorite activity of the day, Michael Boose and Trevor Shoening easily reply with bug identification and stream restoration. After a thoughtful pause, Michael turns to his friend, “Hey Trevor, maybe you and I should go and work for the Forest Service.”

With that ringing endorsement, Miller should consider this year’s Stream Team program a success.



*A student tests the water quality of a tributary in the Starrigavan Valley.*